Sample Title for AAIML

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Abstract

This paper describes the mixtures-of-trees model, a probabilistic model for discrete multi-dimensional domains. Mixtures-of-trees generalize the probabilistic trees of A. D. Raki in a different and complementary direction to that of Bayesian networks. We present efficient algorithms for learning mixtures-of-trees models in maximum likelihood and Bayesian frameworks. We also discuss additional efficiencies that can be obtained when data are "sparse," and we present data structures and algorithms that exploit such sparseness. Experimental results demonstrate the performance of the model for both density estimation and classification. We also discuss the sense in which tree-based classifiers perform an implicit form of feature selection, and demonstrate a resulting insensitivity to irrelevant attributes.

Keywords: Bayesian Networks, Mixture Models, Chow-Liu Trees

1. Introduction

Your introduction goes here! Simply start writing your document and use the Recompile button to view the updated PDF preview. Examples of commonly used commands and features are listed below, to help you get started.

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2. Some examples to get started

2.1 How to create Sections and Subsections

Simply use the section and subsection commands, as in this example document! With Overleaf, all the formatting and numbering is handled automatically according to the template you've chosen. If you're using Rich Text mode, you can also create new section and subsections via the buttons in the editor toolbar.

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Figure 1: This frog was uploaded via the file-tree menu.

Item	Quantity
Widgets	42
Gadgets	13

Table 1: An example table.

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2.3 How to add Tables

Use the table and tabular environments for basic tables — see Table 1, for example. For more information, please see this help article on tables.

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Track changes are available on all our premium plans, and can be toggled on or off using the option at the top of the Review pane. Track changes allow you to keep track of every change made to the document, along with the person making the change.

2.5 How to add Lists

You can make lists with automatic numbering …

1. Like this,

2. and like this.

…or bullet points …

- Like this,

- and like this.

2.6 How to write Mathematics

LaTeX is great at typesetting mathematics. Let $X_1, X_2, \ldots, X_n$ be a sequence of independent and identically distributed random variables with $\mathrm{E}[X_i] = \mu$ and $\mathrm{Var}[X_i] = \sigma^2 < \infty$, and let

$$S_n = \frac{X_1 + X_2 + \cdots + X_n}{n} = \frac{1}{n}\sum_i^n X_i$$

denote their mean. Then as n approaches infinity, the random variables $\sqrt{n}(S_n - \mu)$ converge in distribution to a normal $\mathcal{N}(0, \sigma^2)$.

2.7 How to change the margins and paper size

Usually the template you're using will have the page margins and paper size set correctly for that use-case. For example, if you're using a journal article template provided by the journal publisher, that template will be formatted according to their requirements. In these cases, it's best not to alter the margins directly.

If however you're using a more general template, such as this one, and would like to alter the margins, a common way to do so is via the geometry package. You can find the geometry package loaded in the preamble at the top of this example file, and if you'd like to learn more about how to adjust the settings, please visit this help article on page size and margins.

2.8 How to change the document language and spell check settings

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To configure the document language, simply edit the option provided to the babel package in the preamble at the top of this example project. To learn more about the different options, please visit this help article on international language support.

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2.9 How to add Citations and a References List

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If you have an upgraded account, you can also import your Mendeley or Zotero library directly as a `.bib` file, via the upload menu in the file-tree.

2.10 Good luck!

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